LIST OF CONTENTS

VOLUME 25 NUMBER 1 APRIL 1988

J. Baker, C. Wickland, J. Goldberg and **B. Peterson**	Motor output to lateral rectus in cats during the vestibulo-ocular reflex in three-dimensional space	1
I. López and **G. Meza**	Neurochemical evidence for afferent GABAergic and efferent cholinergic neurotransmission in the frog vestibule	13
K. J. Anderson, R. B. Gibbs and **C. W. Cotman**	Transmitter phenotype is a major determinant in the specificity of synapses formed by cholinergic neurons transplanted to the hippocampus	19
P. Brodal, G. Mihailoff, B. Border, O. P. Ottersen and **J. Storm-Mathisen**	GABA-containing neurons in the pontine nuclei of rat, cat and monkey. An immunocytochemical study	27
M. Steriade, D. Paré, A. Parent and **Y. Smith**	Projections of cholinergic and non-cholinergic neurons of the brainstem core to relay and associational thalamic nuclei in the cat and macaque monkey	47
D. Paré, Y. Smith, A. Parent and **M. Steriade**	Projections of brainstem core cholinergic and non-cholinergic neurons of cat to intralaminar and reticular thalamic nuclei	69
G. F. Martin, T. Cabana and **R. Waltzer**	The origin of projections from the medullary reticular formation to the spinal cord, the diencephalon and the cerebellum at different stages of development in the North American opossum: studies using single and double labeling techniques	87
K. Kitahama, L. Denoroy, M. Goldstein, M. Jouvet and **J. Pearson**	Immunohistochemistry of tyrosine hydroxylase and phenylethanolamine *N*-methyltransferase in the human brain stem: description of adrenergic perikarya and characterization of longitudinal catecholaminergic pathways	97
J. Kohno, K. Shinoda, Y. Kawai, T. Ohuchi, K. Ono and **Y. Shiotani**	Interaction between adrenergic fibers and intermediate cholinergic neurons in the rat spinal cord: a new double-immunostaining method for correlated light and electron microscopic observations	113
M. Śmiałowska	Neuropeptide Y immunoreactivity in the locus coeruleus of the rat brain	123
M. E. Appleyard, J.-L. Vercher and **S. A. Greenfield**	Release of acetylcholinesterase from the guinea-pig cerebellum *in vivo*	133
J. P. Brion, J. Guilleminot, D. Couchie, J. Flament-Durand and **J. Nunez**	Both adult and juvenile tau microtubule-associated proteins are axon specific in the developing and adult rat cerebellum	139
K. Halasy, I. Benedeczky, É. Fekete, L. Tóth and **R. Gábriel**	Enteric neuromuscular junctions: comparison of ultrastructural features in different phylogenetic groups	147
I. Benedeczky and **K. Halasy**	Visualization of non-synaptic release sites in the myenteric plexus of the snail *Helix pomatia*	163
K. Tamura, J. M. Palmer and **J. D. Wood**	Presynaptic inhibition produced by histamine at nicotinic synapses in enteric ganglia	171

T. Green and **G. J. Dockray**	Characterization of the peptidergic afferent innervation of the stomach in the rat, mouse and guinea-pig	181
P. K. Mulderry, M. A. Ghatei, R. A. Spokes, P. M. Jones, A. M. Pierson, Q. A. Hamid, S. Kanse, S. G. Amara, J. M. Burrin, S. Legon, J. M. Polak and **S. R. Bloom**	Differential expression of α-CGRP and β-CGRP by primary sensory neurons and enteric autonomic neurons of the rat	195
A. R. Rittenhouse, M. A. Schwarzschild and **R. E. Zigmond**	Both synaptic and antidromic stimulation of neurons in the rat superior cervical ganglion acutely increase tyrosine hydroxylase activity	207
V. H. Perry and **L. C. L. Silveira**	Functional lamination in the ganglion cell layer of the macaque's retina	217
V. H. Perry and **A. Cowey**	The lengths of the fibres of Henle in the retina of macaque monkeys: implications for vision	225
G. F. Jirikowski, J. D. Caldwell, C. A. Pedersen and **W. E. Stumpf**	Estradiol influences oxytocin-immunoreactive brain systems	237
S. Schwartz-Giblin, M. Canonaco, B. S. McEwen and **D. W. Pfaff**	Effects of *in vivo* estradiol and progesterone on tritiated flunitrazepam binding in rat spinal cord	249
S. McLean and **E. Weber**	Autoradiographic visualization of haloperidol-sensitive sigma receptors in guinea-pig brain	259
M. I. Glavinović and **T. Narahashi**	Depression, recovery and facilitation of neuromuscular transmission during prolonged tetanic stimulation	271
M. I. Glavinović	Effect of blockade of choline uptake by hemicholinium-3 on synaptic output	283
S. Mitani and **H. Okamoto**	Monoclonal antibodies against larval nervous system of *Xenopus laevis*: their specificities and application to analysis of neural development	291
J. M. Palacios, A. Pazos, M. M. Dietl, M. Schlumpf and **W. Lichtensteiger**	The ontogeny of brain neurotensin receptors studied by autoradiography	307
W. G. Thomas and **C. Sernia**	Immunocytochemical localization of angiotensinogen in the rat brain	319
D. Obendorf, U. Schwarzenbrunner, R. Fischer-Colbrie, A. Laslop and **H. Winkler**	Immunological characterization of a membrane glycoprotein of chromaffin granules: its presence in endocrine and exocrine tissues	343
A. Kaji, H. Shigematsu, K. Fujita, T. Maeda and **S. Watanabe**	Parasympathetic innervation of cutaneous blood vessels by vasoactive intestinal polypeptide-immunoreactive and acetylcholinesterase-positive nerves: histochemical and experimental study on rat lower lip	353
SOFTWARE SURVEY SECTION		I
VOLUME 25 NUMBER 2		MAY 1988
COMMENTARIES		
R. G. Brown and **C. D. Marsden**	'Subcortical dementia': the neuropsychological evidence	363
C. A. Marsden, M. H. Joseph, Z. L. Kruk, N. T. Maidment, R. D. O'Neill, J. O. Schenk and **J. A. Stamford**	*In vivo* voltammetry—present electrodes and methods	389

RESEARCH PAPERS

R. E. Powers, R. G. Struble, M. F. Casanova, D. T. O'Connor, C. A. Kitt and **D. L. Price**	Innervation of human hippocampus by noradrenergic systems: normal anatomy and structural abnormalities in aging and in Alzheimer's disease	401
C. M. Waters, R. Peck, M. Rossor, G. P. Reynolds and **S. P. Hunt**	Immunocytochemical studies on the basal ganglia and substantia nigra in Parkinson's disease and Huntington's chorea	419
K. N. Westlund, R. M. Denney, R. M. Rose and **C. W. Abell**	Localization of distinct monoamine oxidase A and monoamine oxidase B cell populations in human brainstem	439
F. P. Eckenstein, R. W. Baughman and **J. Quinn**	An anatomical study of cholinergic innervation in rat cerebral cortex	457
J. H. Kim, J.-J. Wang and **T. J. Ebner**	Alterations in simple spike activity and locomotor behavior associated with climbing fiber input to Purkinje cells in a decerebrate walking cat	475
A. M. Thomson	Inhibitory postsynaptic potentials evoked in thalamic neurons by stimulation of the reticularis nucleus evoke slow spikes in isolated rat brain slices—I	491
A. M. Thomson	Biphasic responses of thalamic neurons to GABA in isolated rat brain slices—II	503
R. M. Wightman, C. Amatore, R. C. Engstrom, P. D. Hale, E. W. Kristensen, W. G. Kuhr and **L. J. May**	Real-time characterization of dopamine overflow and uptake in the rat striatum	513
B. J. Morris, V. Höllt and **A. Herz**	Dopaminergic regulation of striatal proenkephalin mRNA and prodynorphin mRNA: contrasting effects of D_1 and D_2 antagonists	525
M. N. Williams and **R. L. M. Faull**	The nigrotectal projection and tectospinal neurons in the rat. A light and electron microscopic study demonstrating a monosynaptic nigral input to identified tectospinal neurons	533
M. Takada, Z. K. Li and **T. Hattori**	Collateral projection from the substantia nigra to the striatum and superior colliculus in the rat	563
M. N. Wallace	Lattices of high histochemical activity occur in the human, monkey, and cat superior colliculus	569
I. Kakucska, M. L. Tappaz, Gy. Gaal, M. E. Stoeckel and **G. B. Makara**	GABAergic innervation of somatostatin-containing neurosecretory cells of the anterior periventricular hypothalamic area: a light and electron microscopy double immunolabelling study	585
L. Velley, C. Verney, E. Kempf and **B. Berger**	Opposite effects of ibotenic acid and 6-hydroxydopamine lesions of the lateral hypothalamus on intracranial self-stimulation and stimulation-induced locomotion	595
P. W. J. Burnet, D. Bretherton-Watt, M. A. Ghatei and **S. R. Bloom**	Cerebellin-like peptide: tissue distribution in rat and guinea-pig and its release from rat cerebellum, hypothalamus and cerebellar synaptosomes *in vitro*	605
T. Araki, M. Yamano, T. Murakami, A. Wanaka, H. Betz and **M. Tohyama**	Localization of glycine receptors in the rat central nervous system: an immunocytochemical analysis using monoclonal antibody	613

M. D. Hirsch and **C. J. Helke**	Bulbospinal thyrotropin-releasing hormone projections to the intermediolateral cell column: a double fluorescence immunohistochemical–retrograde tracing study in the rat	625
C. C. LaMotte	Lamina X of primate spinal cord: distribution of five neuropeptides and serotonin	639
S. U. Kim, D. N. Osborne, M. W. Kim, I. Spigelman, E. Puil, D. H. Shin and **A. Eisen**	Long-term culture of human fetal spinal cord neurons: morphological, immunocytochemical and electrophysiological characteristics	659
P. E. Rafuse, P. A. Smith and **J. A. Zidichouski**	Examination of the role of calcium in the adrenaline-induced hyperpolarization of bullfrog sympathetic neurons	671
E. Bastiaensen, J. De Block and **W. P. De Potter**	Neuropeptide Y is localized together with enkephalins in adrenergic granules of bovine adrenal medulla	679
A. Wada, M. Arita, N. Yanagihara and **F. Izumi**	Binding of [^{3}H]phencyclidine to adrenal medullary cells: inhibition of ^{22}Na influx, ^{45}Ca influx, ^{86}Rb efflux and catecholamine secretion caused by carbachol and veratridine	687
D. A. Bereiter and **D. S. Gann**	Adrenal secretion of catecholamines evoked by chemical stimulation of trigeminal nucleus caudalis in the cat	697
R. D. Fields and **M. H. Ellisman**	Functionally significant plasticity of synaptic morphology: studies on the ribbon synapse of the ampullae of Lorenzini	705
B. A. MacVicar, K. Baker and **S. A. Crichton**	Kainic acid evokes a potassium efflux from astrocytes	721
ERRATUM		727
SOFTWARE SURVEY SECTION		I
VOLUME 25 NUMBER 3		JUNE 1988
COMMENTARY		
B. Rudy	Diversity and ubiquity of K channels	729
RESEARCH PAPERS		
A. G. Bragin, A. Bohne and **O. S. Vinogradova**	Transplants of the embryonal rat somatosensory neocortex in the barrel field of the adult rat: responses of the grafted neurons to sensory stimulation	751
R. Nishi and **A. L. Willard**	Conditioned medium alters electrophysiological and transmitter-related properties expressed by rat enteric neurons in cell culture	759
J. Zezula, R. Cortés, A. Probst and **J. M. Palacios**	Benzodiazepine receptor sites in the human brain: autoradiographic mapping	771
J. Ballesta, F. Carlei, A. E. Bishop, J. H. Steel, S. J. Gibson, M. Fahey, R. Hennessey, J. Domin, S. R. Bloom and **J. M. Polak**	Occurrence and developmental pattern of neuromedin U-immunoreactive nerves in the gastrointestinal tract and brain of the rat	797
P. W. Mantyh, C. R. Mantyh, T. Gates, S. R. Vigna and **J. E. Maggio**	Receptor binding sites for substance P and substance K in the canine gastrointestinal tract and their possible role in inflammatory bowel disease	817

F. J. Diez Guerra, M. Zaidi, P. Bevis, I. MacIntyre and **P. C. Emson**	Evidence for release of calcitonin gene-related peptide and neurokinin A from sensory nerve endings *in vivo*	839
R. Gill, A. C. Foster and **G. N. Woodruff**	MK-801 is neuroprotective in gerbils when administered during the post-ischaemic period	847
P. Voorn, A. Kalsbeek, B. Jorritsma-Byham and **H. J. Groenewegen**	The pre- and postnatal development of the dopaminergic cell groups in the ventral mesencephalon and the dopaminergic innervation of the striatum of the rat	857
P. Baruch, F. Artaud, G. Godeheu, L. Barbeito, J. Glowinski and **A. Chéramy**	Substance P and neurokinin A regulate by different mechanisms dopamine release from dendrites and nerve terminals of the nigrostriatal dopaminergic neurons	889
Z. Henderson and **T. E. Salt**	The effects of *N*-acetylaspartylglutamate and distribution of *N*-acetylaspartylglutamate-like immunoreactivity in the rat somatosensory thalamus	899
P. A. T. Kelly, C. J. Davis and **G. M. Goodwin**	Differential patterns of local cerebral glucose utilization in response to 5-hydroxytryptamine$_1$ agonists	907
M. Szikszay and **E. D. London**	Effects of subacute capsaicin treatment on local cerebral glucose utilization in the rat	917
K. Sekiya, M. A. Ghatei, S. Lacoumenta, P. W. J. Burnet, N. Zamir, J. M. Burrin, J. M. Polak and **S. R. Bloom**	The distribution of melanin-concentrating hormone-like immunoreactivity in the central nervous system of rat, guinea-pig, pig and man	925
L. Domenici, H. J. Waldvogel, C. Matute and **P. Streit**	Distribution of GABA-like immunoreactivity in the pigeon brain	931
D. G. Brunder and **E. M. Lieberman**	Studies of axon–glial cell interactions and periaxonal K^+ homeostasis—I. The influence of Na^+, K^+, Cl^- and cholinergic agents on the membrane potential of the adaxonal glia of the crayfish medial giant axon	951
S. Hassan and **E. M. Lieberman**	Studies of axon–glial cell interactions and periaxonal K^+ homeostasis—II. The effect of axonal stimulation, cholinergic agents and transport inhibitors on the resistance in series with the axon membrane	961
E. M. Lieberman and **S. Hassan**	Studies of axon–glial cell interactions and periaxonal K^+ homeostasis—III. The effect of anisosmotic media and potassium on the relationship between the resistance in series with the axon membrane and glial cell volume	971
K. D. Walton and **M. Chesler**	Activity-related extracellular potassium transients in the neonatal rat spinal cord: an *in vitro* study	983
Z.-Q. Zhao and **A. W. Duggan**	Idazoxan blocks the action of noradrenaline but not spinal inhibition from electrical stimulation of the locus coeruleus and nucleus Kolliker–Fuse of the cat	997
H. Kaba and **E. B. Keverne**	The effect of microinfusions of drugs into the accessory olfactory bulb on the olfactory block to pregnancy	1007
C. R. Mayes, A. G. Watts, J. K. McQueen, G. Fink and **H. M. Charlton**	Gonadal steroids influence neurophysin II distribution in the forebrain of normal and mutant mice	1013
P. Das and **G. McCollum**	Invariant structure in locomotion	1023
E. F. Stanley, G. Ehrenstein and **J. T. Russell**	Evidence for anion channels in secretory vesicles	1035

D. J. Withington-Wray, S. W. Mifflin and K. M. Spyer	Intracellular analysis of respiratory-modulated hypoglossal motoneurons in the cat	1041
M. L. Epstein, J. P. Davis, L. E. Gellman, J. R. Lamb and J. L. Dahl	Cholinergic neurons of the chicken ciliary ganglion contain somatostatin	1053
P. Ekström and H. Meissl	Intracellular staining of physiologically identified photoreceptor cells and hyperpolarizing interneurons in the teleost pineal organ	1061
H. Meissl and P. Ekström	Photoreceptor responses to light in the isolated pineal organ of the trout, *Salmo gairdneri*	1071
F. Pongrácz, J. Martos and F. Zsuppán	Nerve cells with irregular processes: demonstration of anisotropic core geometry of a pyramidal cell	1077
J. Mellanby, M. A. Beaumont and P. A. Thompson	The effect of lanthanum on nerve terminals in goldfish muscle after paralysis with tetanus toxin	1095
SOFTWARE SURVEY SECTION		I